



Before mounting an antenna, see **Safety Information**. For complete safety, regulatory, and other product marking information, see the user manual for your ETS-Lindgren antenna.

Safety Information



ONLY QUALIFIED PERSONNEL should install, operate, or service this equipment.

CONTACT ETS-LINDGREN PRIOR TO SERVICING. Servicing (or modifying) the unit by yourself may void your warranty. If you attempt to service the unit by yourself, disconnect all electrical power before starting. There are voltages at many points in the instrument that could, if contacted, cause personal injury. Only trained service personnel should perform adjustments and/or service procedures upon this instrument. Capacitors inside this instrument may still be CHARGED even when instrument is disconnected from its power source.

Warranty Information

For complete warranty information, see the user manual for your ETS-Lindgren antenna.

This guide describes the hardware required to mount your ETS-Lindgren antenna to a tripod, mast, or boom, and is intended to be used in conjunction with the antenna user manual. This guide does not replace the antenna user manual.

These antennas and mount destinations are included:

Antenna Type

- BiConiLog™ Antennas** – 3140B, 3149, 3142C, 3142D
- Biconical Antennas** – 3109, 3104C, 3110B, 3110C
- Mini-Bicon Antennas** – 3180, 3181, 3182, 3183, 3184
- Log Periodic Antennas** – 3144, 3147, 3148, 3148B
- Double-Ridged Waveguide Horns** – 3106B, 3115, 3116, 3117
- 3164 Series Horns** – Quad-Ridge Horns (–05, –06, –07, –08), Dual-Polarized Horns (–03, –04)
- Pyramidal Horn Antennas** – 3160 Series, 3161 Series
- Dipoles** – 3121C, 3121D
- Loop Antennas and Rod Antennas** – loop antennas, rod antennas
- Conical Log Spirals** – 3101, 3102, 3103
- High Gain Conical Horns** – 3163 Series (–03, –04, –05, –06)

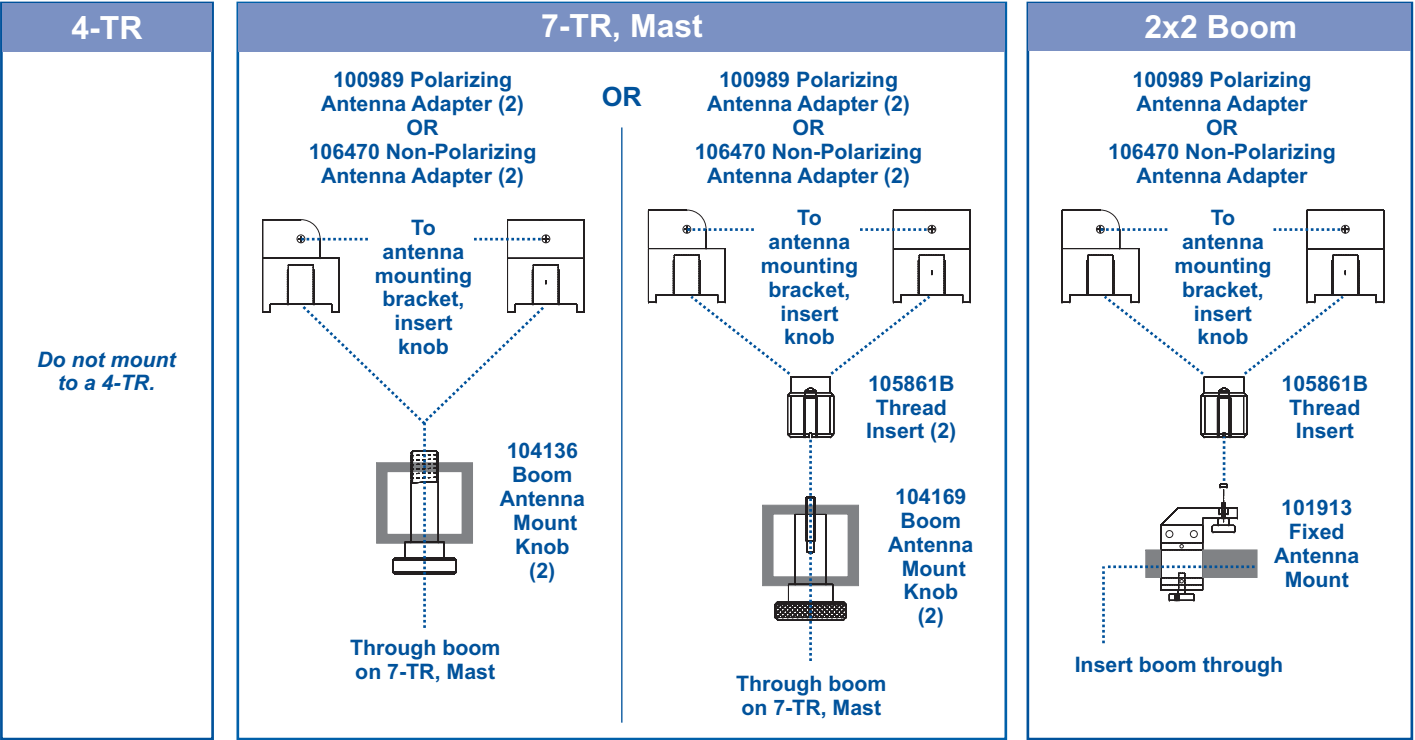
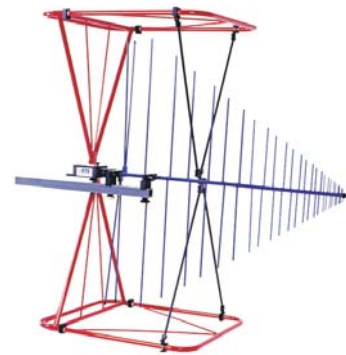
Mount Destination

- Model 4-TR Tripod** – ETS-Lindgren 4-TR tripod
- Model 7-TR Tripod Positioner** – includes 109042, 106328, 108197, and 108507 booms:
 - 109042** – straight; for general antenna mounting on a 7-TR
 - 106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - 108197** – center rotate; for rear-mount stinger-type antennas only
 - 108507** – for the 3106 and 3106B only
- Mast** – 2070 Series, 2075, and 2175 Antenna Towers
- 2x2 Boom** – typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems



BiConiLog™ Antennas

3140B



Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



Standard Parts

Antennas shown here ship with these standard parts:

- 105861B Thread Insert (3140B ships with two)
- 100989 Polarizing Antenna Adapter (3140B ships with two)
- Antennas include mounting bracket (attached) and mounting knob(s)

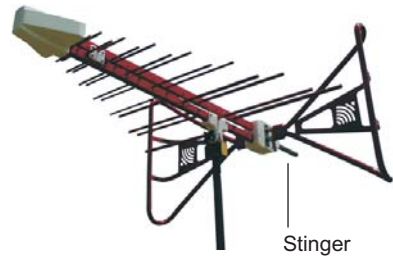
Notes

- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

BiConiLog™ Antennas, continued

3149, 3142D, 3142C

3149



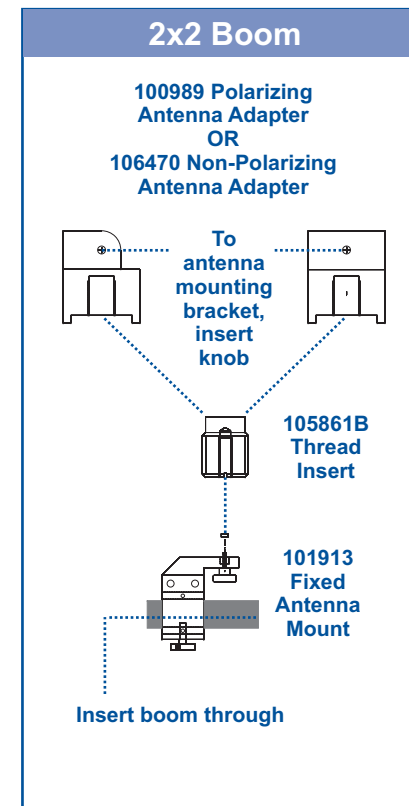
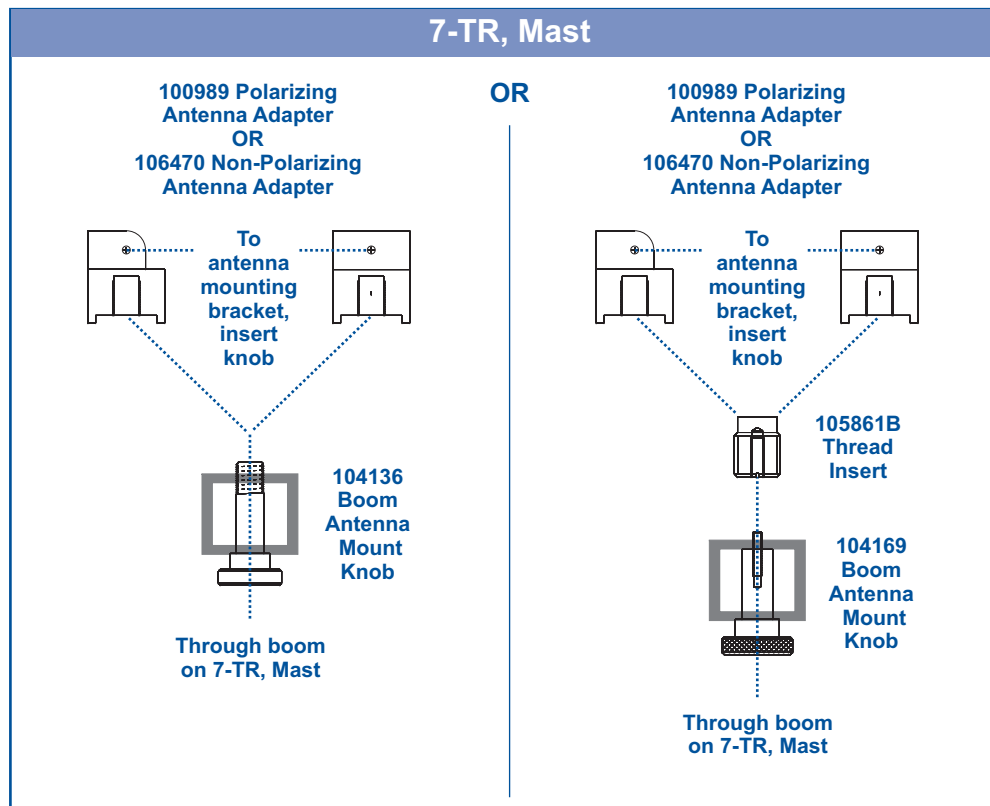
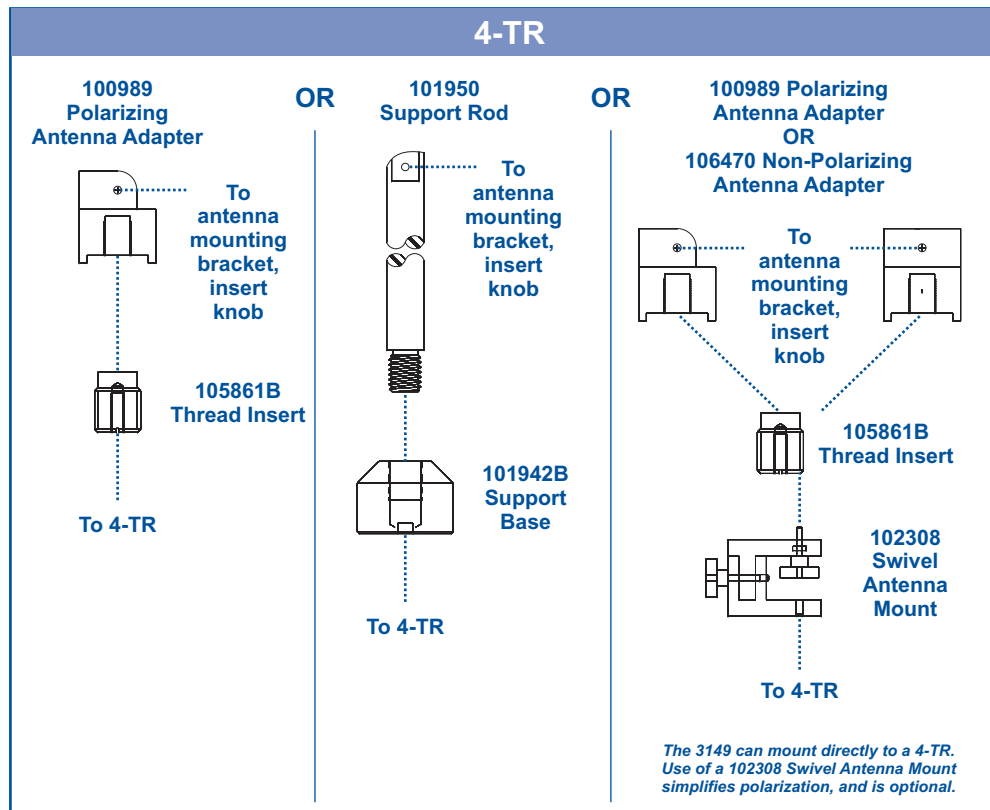
Stinger

3142D



Stinger

3142C



Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



Standard Parts

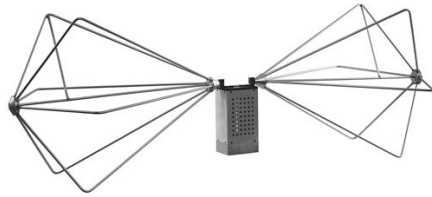
- Antennas shown here ship with these standard parts:
- 105861B Thread Insert (3140B ships with two)
 - 100989 Polarizing Antenna Adapter (3140B ships with two)
 - Antennas include mounting bracket (attached) and mounting knob(s)

Notes

- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

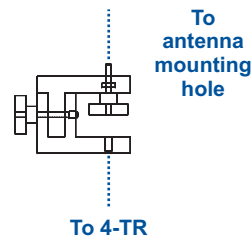
Biconical Antennas

3109



4-TR

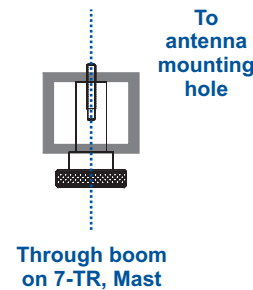
102308 Swivel Antenna Mount



Can mount directly to a 4-TR.
Use of a 102308 Swivel Antenna Mount simplifies polarization, and is optional.

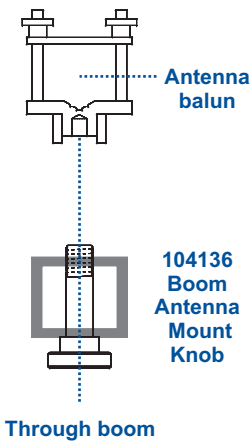
7-TR, Mast

104169 Boom Antenna Mount Knob



2x2 Boom

106102 Universal Antenna Mount



Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



Standard Parts

3110C, 3110B, and 3104C antennas ship with these standard parts:

- 100733 Support Rod
- 101942B Support Base
- 102108 Clamp Block

Notes

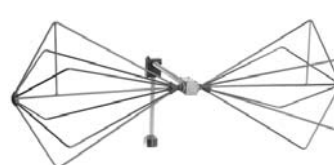
- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

3110C, 3110B, 3104C

3110C



3110B

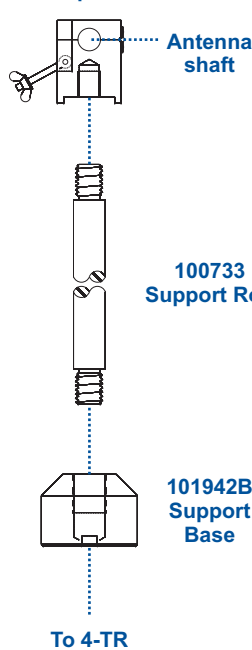


3104C



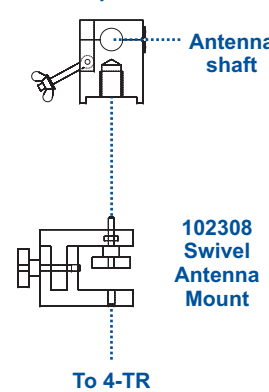
4-TR

102108 Clamp Block



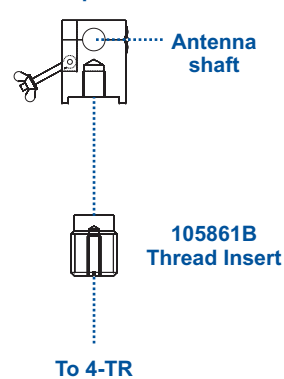
OR

102108 Clamp Block



OR

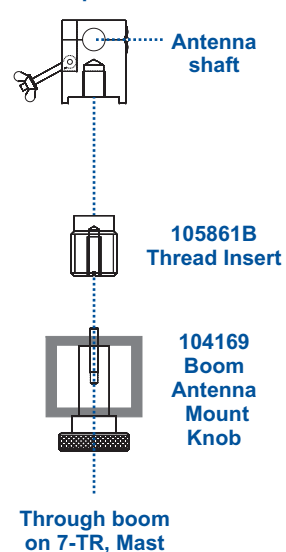
102108 Clamp Block



Can mount directly to a 4-TR.
Use of a 102308 Swivel Antenna Mount simplifies polarization, and is optional.

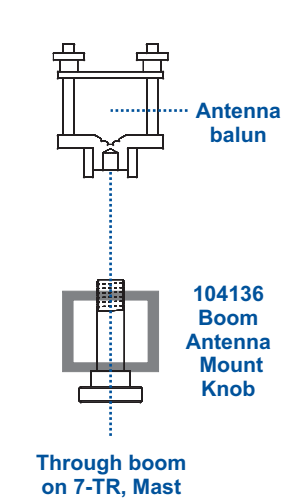
7-TR, Mast

102108 Clamp Block



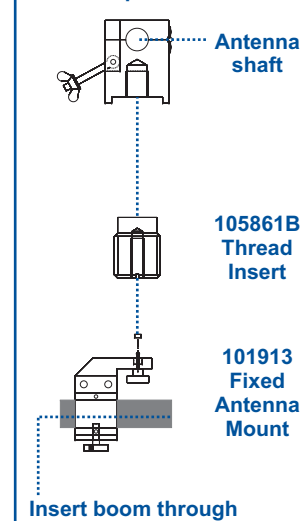
OR

106102 Universal Antenna Mount



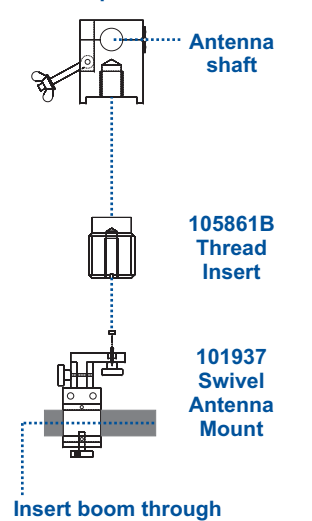
2x2 Boom

102108 Clamp Block



OR

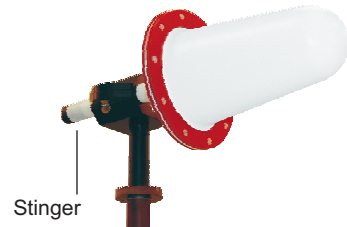
102108 Clamp Block



Mini-Bicon Antennas

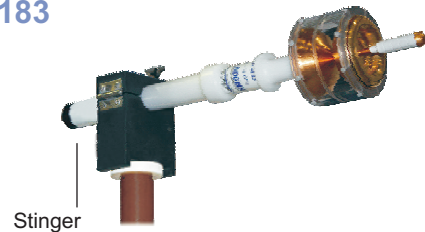
3181, 3183, 3184

3181, 3184



Stinger

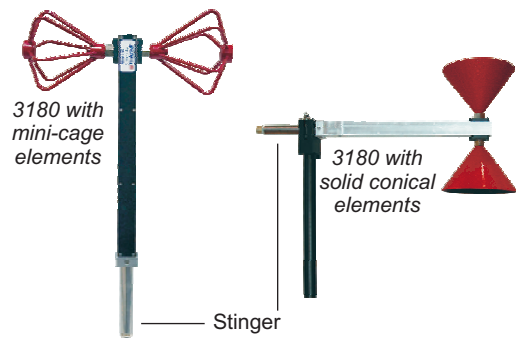
3183



Stinger

3180, 3182

3180

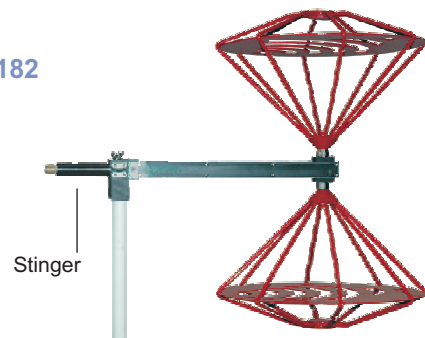


3180 with mini-cage elements

3180 with solid conical elements

Stinger

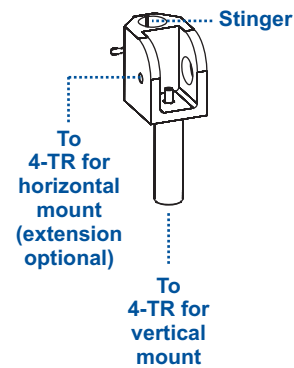
3182



Stinger

4-TR

113956 Antenna Mount Assembly



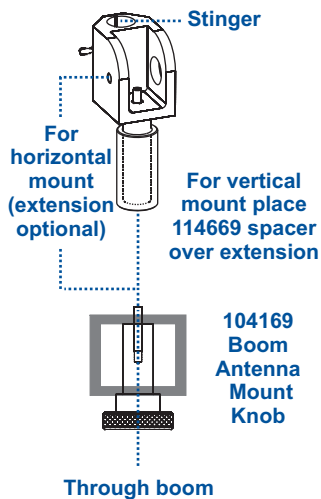
Stinger

To 4-TR for horizontal mount (extension optional)

To 4-TR for vertical mount

7-TR, Mast

113956 Antenna Mount Assembly



Stinger

For horizontal mount (extension optional)

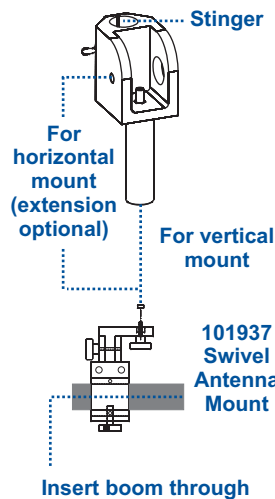
For vertical mount place 114669 spacer over extension

104169 Boom Antenna Mount Knob

Through boom

2x2 Boom

113956 Antenna Mount Assembly



Stinger

For horizontal mount (extension optional)

For vertical mount

101937 Swivel Antenna Mount

Insert boom through

About Mounts for 3181/3183/3184

3181, 3183, and 3184 ship with 113956 Antenna Mount Assembly, which includes the 114669 Spacer; no additional hardware required to mount to 4-TR

Standard Parts

3180 and 3182 antennas ship with these standard parts:

- 100733 Support Rod
- 101942B Support Base
- 102108 Clamp Block

Stinger Mounts

3181, 3183, 3184



- **4-TR:** See *About Mounts for 3181/3183/3184*
- **7-TR, Mast, 2x2 Boom:** Additional hardware required

3180, 3182

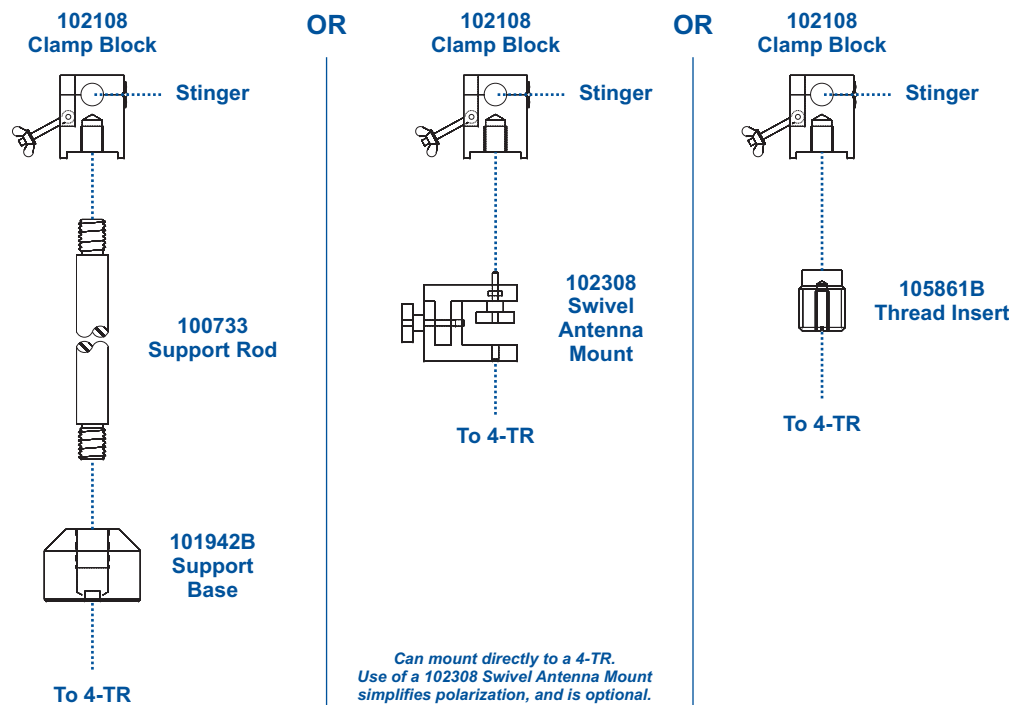


- **4-TR / 7-TR:** Mounts directly to a 4-TR or 7-TR without additional hardware
- **Mast:** Additional hardware required

Notes

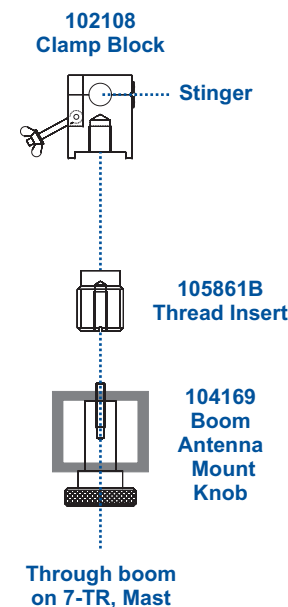
- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

4-TR



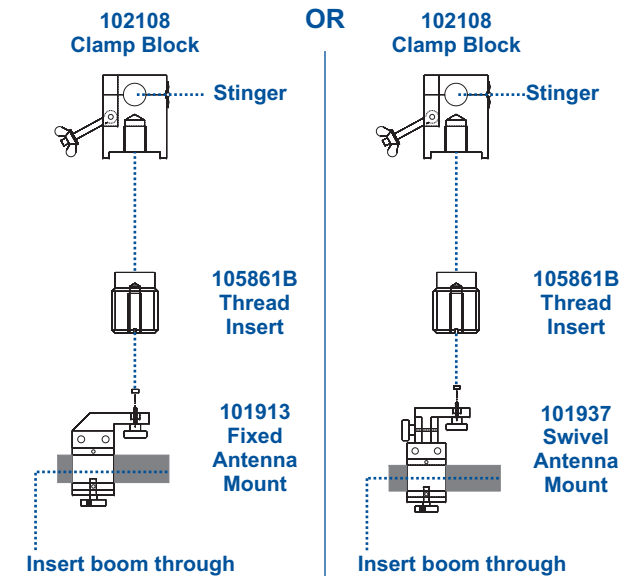
Can mount directly to a 4-TR. Use of a 102308 Swivel Antenna Mount simplifies polarization, and is optional.

7-TR, Mast



Through boom on 7-TR, Mast

2x2 Boom

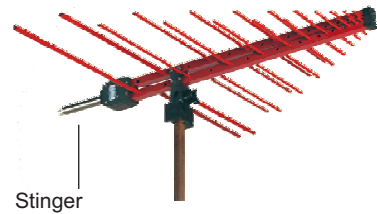


Insert boom through

Insert boom through

Log Periodic Antennas

3148B



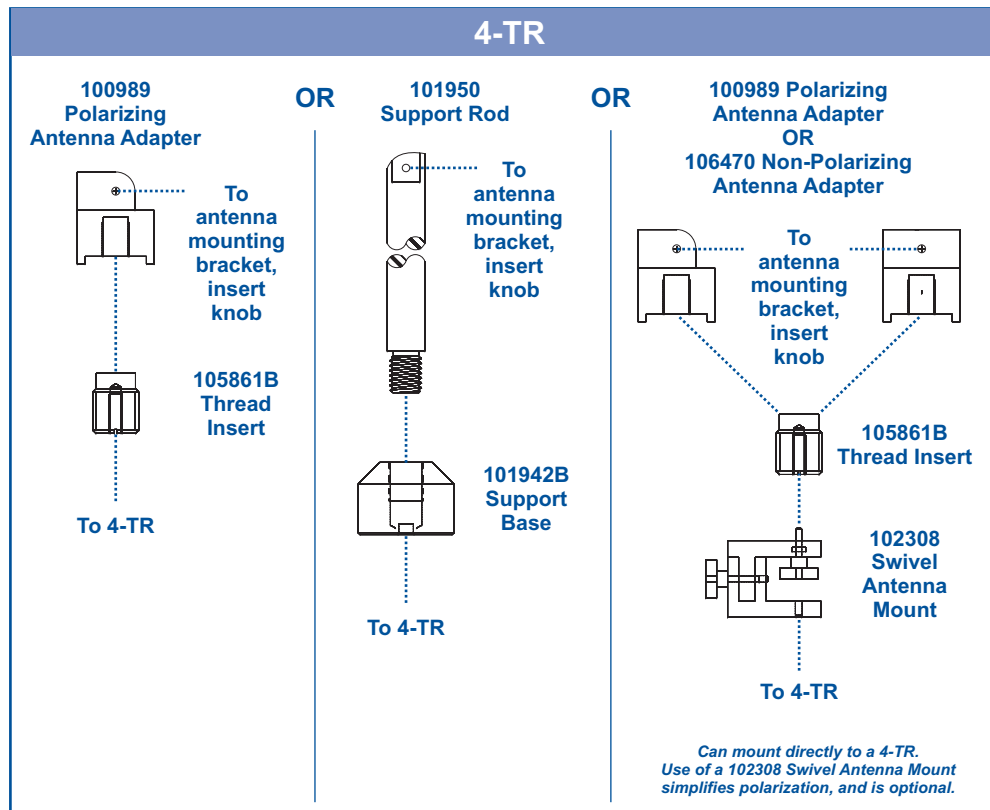
Stinger

3148, 3147, 3144

3148



3147



Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



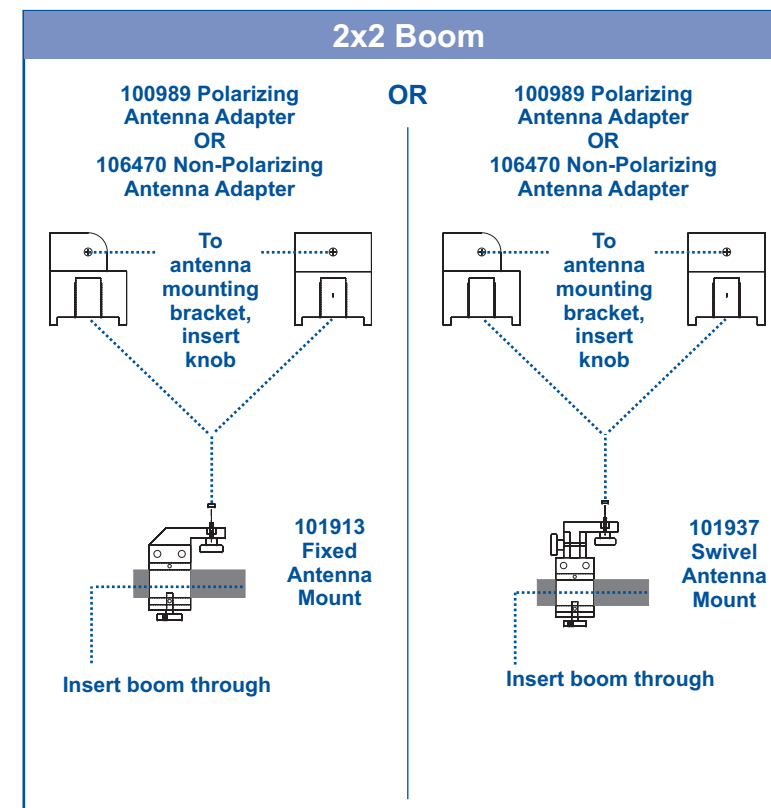
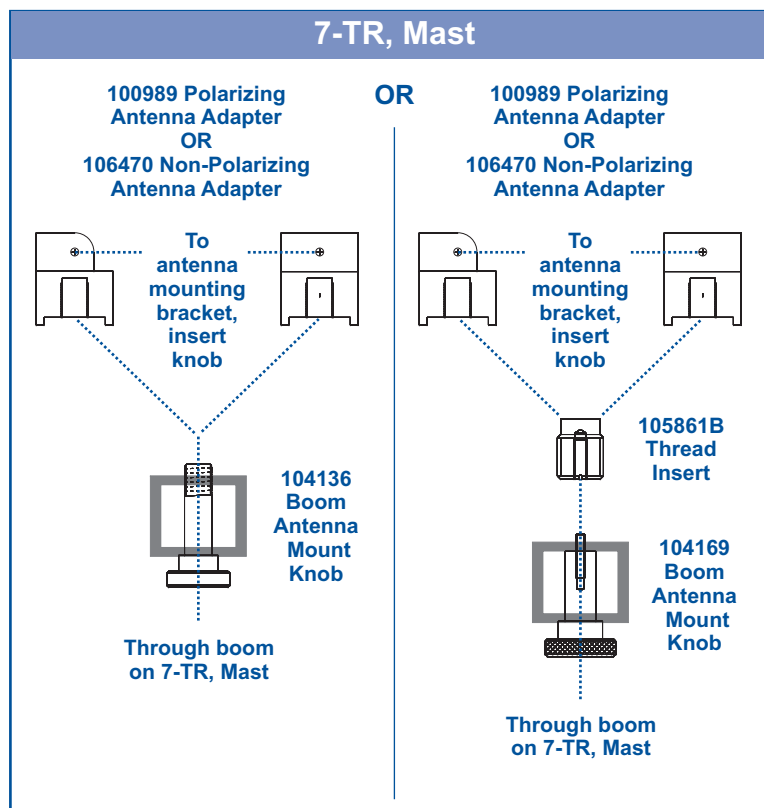
Standard Parts

Antennas shown here ship with these standard parts:

- 105861B Thread Insert
- 100989 Polarizing Antenna Adapter
- Antennas include mounting bracket (attached) and mounting knob(s)

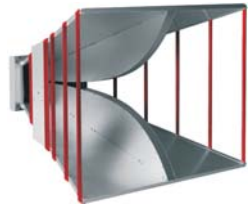
Notes

- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems



Double-Ridged Waveguide Horns

3106B



3115



3116



3117



Stinger

Mounted onto 4-TR

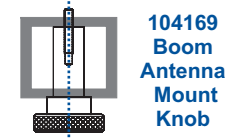
4-TR

The 3115, 3116, and 3117 mount directly to a 4-TR. Mounting hardware is included; no additional hardware required.

Do not mount the 3106B to a 4-TR.

7-TR, Mast

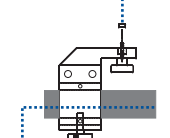
To antenna mounting hole



Through boom on 7-TR, Mast

2x2 Boom

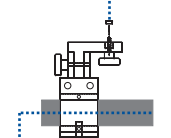
To antenna mounting hole



Insert boom through

OR

To antenna mounting hole



Insert boom through

Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



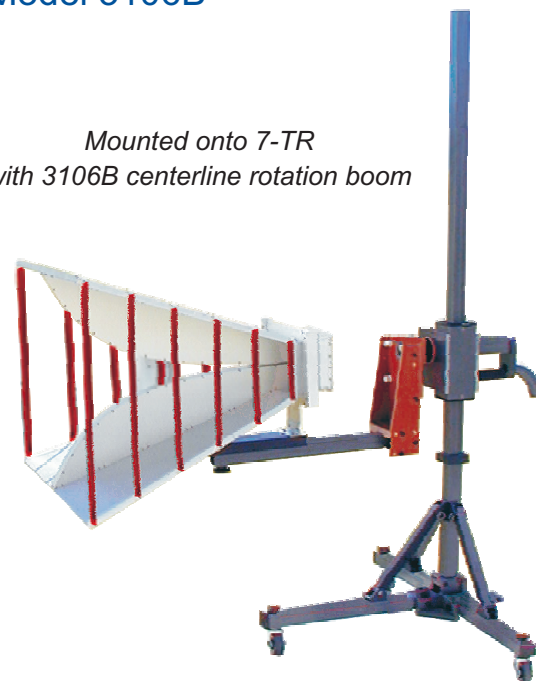
Notes

- **7-TR** refers to these booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
 - (for 3106/B only) **108507** – centerline rotation boom; when changing polarization, maintains centerline rotation
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

Mount Example

Model 3106B

Mounted onto 7-TR with 3106B centerline rotation boom



3164 Series Horns

Quad-Ridge Horns
3164-05, -06, -07, -08



4-TR

Do not mount 3164-06, -07, or -08 antennas to a 4-TR.

See About 3164 Mounts.

7-TR, Mast

106974 or 112859 Mount

OR

106974 or 112859 Mount

To antenna mounting hole

104136 Boom Antenna Mount Knob

105861B Thread Insert

104169 Boom Antenna Mount Knob

Through boom on 7-TR, Mast

Through boom on 7-TR, Mast

See About 3164 Mounts.

2x2 Boom

106974 or 112859 Mount

To antenna mounting hole

105861B Thread Insert

101913 Fixed Antenna Mount

Insert boom through

See About 3164 Mounts.

- About 3164 Mounts
- **3164-05**—ships with mounting hardware; no additional hardware required to mount to 4-TR, 7-TR, mast, or 2x2 boom
 - **106974 Mount**—only for 3164-03, -04, -06, and -07
 - **112859 Mount**—only for 3164-08

- Standard Parts
- **105861B Thread Insert**—ships with 3164-08
 - **106974 Mount**—ships with 3164-06 and 3164-07

- Notes
- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
 - **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
 - **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

Dual-Polarized Horns
3164-03, -04



4-TR

106974 Mount

To antenna mounting hole

105861B Thread Insert

To 4-TR

7-TR, Mast

106974 Mount

To antenna mounting hole

104136 Boom Antenna Mount Knob

Through boom on 7-TR, Mast

2x2 Boom

106974 Mount

To antenna mounting hole

105861B Thread Insert

101913 Fixed Antenna Mount

Insert boom through

Pyramidal Horn Antennas

3160 Series, 3161 Series



4-TR

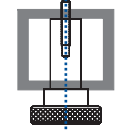
Pyramidal horn antennas mount directly to a 4-TR; no additional hardware required.

Do not mount 3160-01, 3160-02, and 3161-01 antennas to a 4-TR.

See *About 3160 Mounts*.

7-TR, Mast

To
antenna
mounting
hole



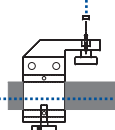
104169
Boom
Antenna
Mount
Knob

Through boom
on 7-TR, Mast

See *About 3160 Mounts*.

2x2 Boom

To
antenna
mounting
hole

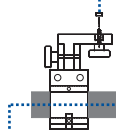


101913
Fixed
Antenna
Mount

Insert boom through

OR

To
antenna
mounting
hole



101937
Swivel
Antenna
Mount

Insert boom through

See *About 3160 Mounts*.

About 3160 Mounts

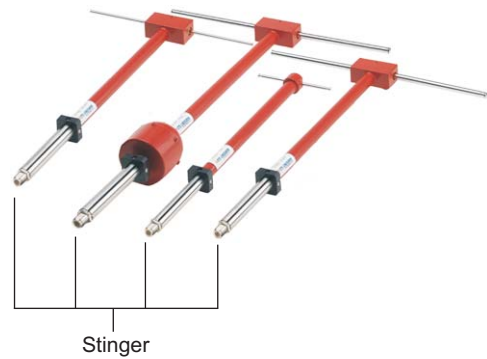
- **3160-09** and **3160-10**—ship with a supplemental mount that may be used with the 4-TR, 7-TR, mast, and 2x2 boom

Notes

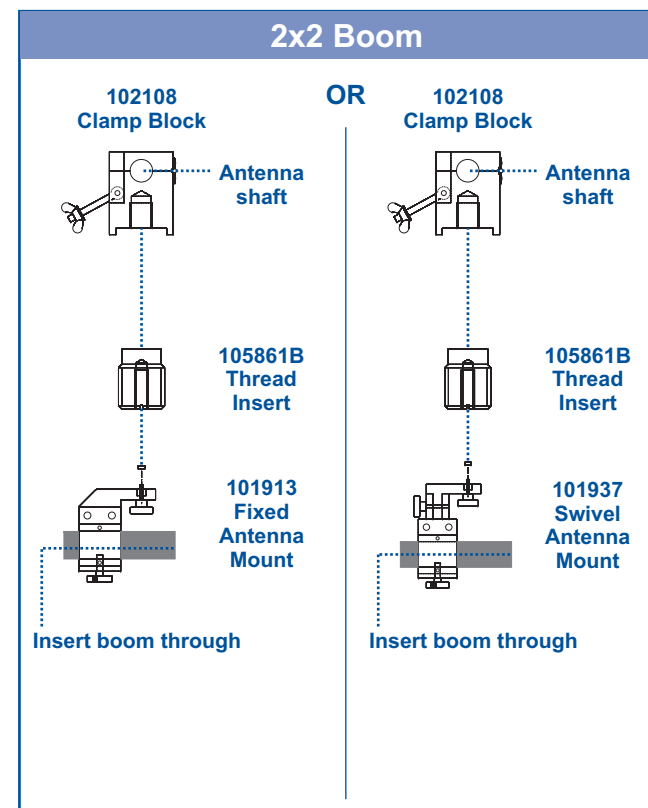
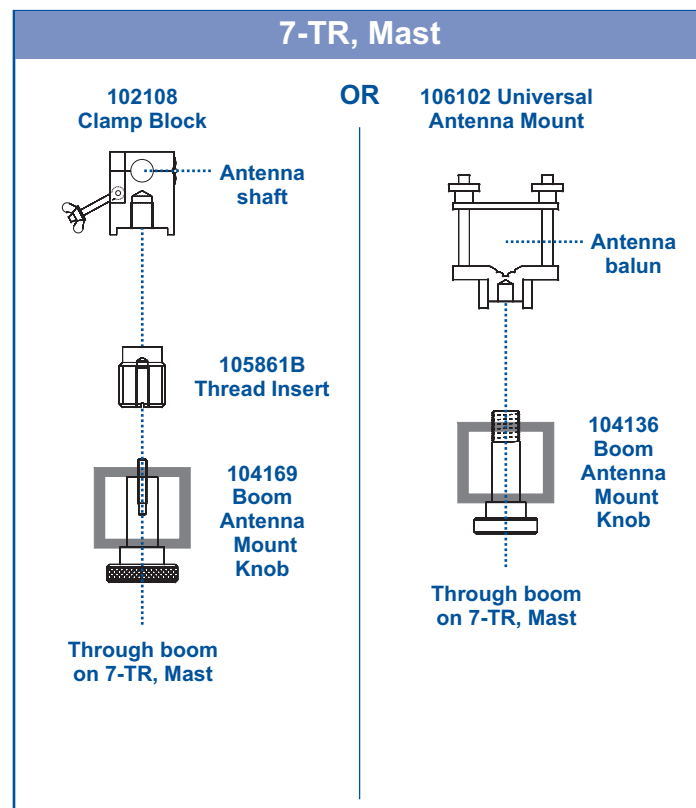
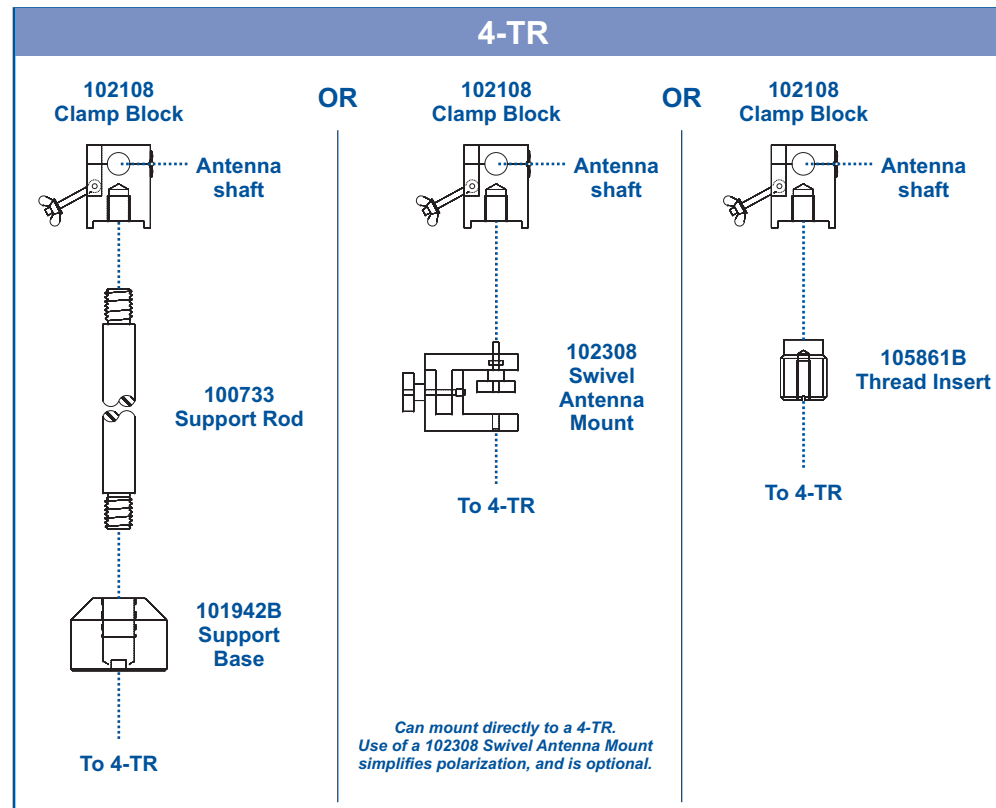
- **4-TR**: Do not mount large pyramidal horn antennas to a 4-TR.
- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** — straight; for general antenna mounting on a 7-TR
 - **106328** — offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** — center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

Dipoles

3121D



3121C



Stinger Mounts

- **4-TR:** Do not mount to a 4-TR
- **7-TR:** Mounts directly to a 7-TR without additional hardware
- **Mast:** Additional hardware required to mount to a mast



Standard Parts

Antennas shown here ship with these antenna adapters:

- 100733 Support Rod
- 101942B Support Base
- 102108 Clamp Block

Notes

- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

Loop Antennas and Rod Antennas

Loop Antennas



Rod Antennas

3301C



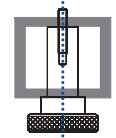
4-TR

Loop antennas and rod antennas mount directly to a 4-TR; no additional hardware required.

See *About 3301C*

7-TR, Mast

To antenna mounting hole

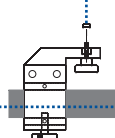


104169
Boom
Antenna
Mount
Knob

Through boom
on 7-TR, Mast

2x2 Boom

To antenna mounting hole

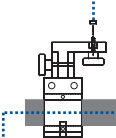


101913
Fixed
Antenna
Mount

Insert boom through

OR

To antenna mounting hole



101937
Swivel
Antenna
Mount

Insert boom through

About 3301C

- **4-TR Light Tripod**—To comply with the MIL-STD-461F standard, a smaller tripod (4-TR, 1ML) is available (optional).
- **MIL-STD-461F Kit**—To comply with the standard, a cable and grounding kit (113359) is included with the 3301C.

Notes

- **7-TR** refers to 109042, 106328, and 108197 booms:
 - **109042** – straight; for general antenna mounting on a 7-TR
 - **106328** – offset; for general antenna mounting on a 7-TR with pneumatic or manual polarization
 - **108197** – center rotate; for rear-mount stinger-type antennas only
- **Mast** refers to 2070 Series, 2075, and 2175 Antenna Towers
- **2x2 Boom** refers to a typical 2-inch by 2-inch boom; non-ETS-Lindgren and previous generation EMCO positioning systems

Conical Log Spirals

3101



3102



3103



4-TR

Conical log spirals mount directly to a 4-TR; no additional hardware required.

7-TR, Mast

Conical log spirals mount directly to a 7-TR. Mounting hardware is included; no additional hardware required.

2x2 Boom

Conical log spirals not intended for 2x2 boom.

- Standard Parts
- **101942B Support Base**—ships with 3101, 3102, and 3103
 - **101941 Support Rod**—ships with 3101
 - **101943B Support Rod**—ships with 3102
 - **101944 Support Rod**—ships with 3103

- Notes
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High Gain Conical Horns

3163 Series -03, -04, -05, -06

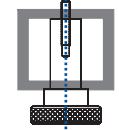


4-TR

*Model 3163 Series
horn antennas
mount directly to a 4-TR;
no additional hardware
required.*

7-TR, Mast

To
antenna
mounting
hole

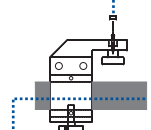


**104169
Boom
Antenna
Mount
Knob**

Through boom
on 7-TR, Mast

2x2 Boom

To
antenna
mounting
hole

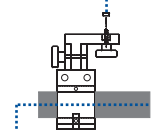


**101913
Fixed
Antenna
Mount**

Insert boom through

OR

To
antenna
mounting
hole



**101937
Swivel
Antenna
Mount**

Insert boom through

About 3163 Series

- Each Model 3163 Series includes a built-in 1/4–20 thread mount.
- The backplate on each Model 3163 Series provides threaded holes for mounting directly into the feed section of a tapered chamber. Additionally, you can use the threaded holes to create your own custom mounting solution. See the 3163 manual for a diagram of each backplate.

Notes

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 - 109042** – straight; for general antenna mounting on a 7-TR
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 - 108197** – center rotate; for rear-mount stinger-type antennas only
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Mount Examples

3180



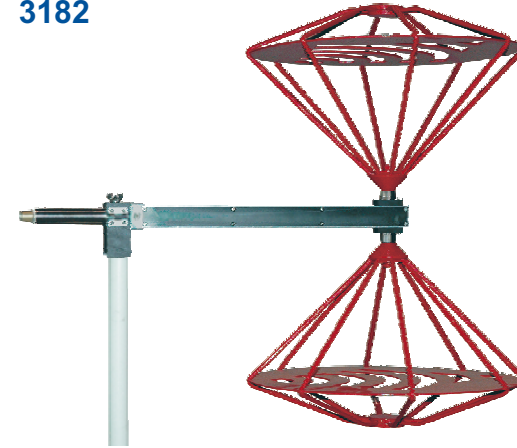
Stinger-mounted onto a 4-TR tripod
with a 102108 clamp block

3181, 3184



Stinger-mounted
onto 4-TR tripod with the
113956 antenna mount assembly

3182



Stinger-mounted onto 4-TR tripod
with a 102108 clamp block and 100733 support rod
(101942B support base not shown)

3183



Stinger-mounted onto 4-TR tripod
with a 102108 clamp block

3301C



Mounted onto tripod